

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-23. (Canceled)

24. (New) A system coupled to a network comprised of a plurality of storage and host devices, comprising:

a processor;
a representation of a topology of the host and storage devices in the network;
a first queue including at least one task;
a second queue having at least one notification for each task in the first queue;
a computer readable medium including a program executed by the processor to perform for tasks in the first queue:

executing the task in the first queue to process the at least one notification for the task to update the representation of the topology of the network.

25. (New) The system of claim 24, wherein each notification indicates an update to the topology of the devices in the network.

26. (New) The system of claim 25, wherein the updates to the topology indicated by the notifications are a member of a set of updates comprising: adding a new storage or service device to the network; modifying attributes of one device in the network; indicating that a device is missing; a change in a relationship or interconnectivity of the devices.

27. (New) The system of claim 24, wherein at least one notification is generated in response to processing a scan from at least one scanner in the network, wherein the operations further comprise:

receiving a scan complete notification in response to the generation of all the notifications indicating updates resulting from the processing of the scan.

28. (New) The system of claim 27, wherein one task in the first queue is associated with a group of the notifications resulting from the processing of one scan, wherein the task processes the associated group notifications in the second queue in response to receiving the scan complete notification.

29. (New) The system of claim 27, wherein the notifications related to the processing of one scan are processed atomically.

30. (New) The system of claim 27, further comprising:
adding to the second queue the notifications received in response to the processing of one scan; and

adding a task to the first queue in response to the scan complete notification to process the notifications added to the second queue resulting of the processing of the scan for which the scan complete notification was received.

31. The system of claim 30, wherein the tasks in the first queue are executed sequentially.

32. The system of claim 30, wherein the notifications in the first queue are processed on a First-In-First-Out (FIFO) basis or on a basis of priority.

33. The system of claim 24, wherein at least one task queued in the first queue indicates an operator administrator request to modify a device in the network.

34. (New) A method, comprising:
providing a representation of a topology of host and storage devices in the network;
providing a first queue including at least one task;
providing a second queue having at least one notification for each task in the first queue;
and

executing the tasks in the first queue to process the at least one notification for the tasks to update the representation of the topology of the network.

35. (New) The method of claim 34, wherein each notification indicates an update to the topology of the devices in the network.

36. (New) The method of claim 35, wherein the updates to the topology indicated by the notifications are a member of a set of updates comprising: adding a new storage or service device to the network; modifying attributes of one device in the network; indicating that a device is missing; a change in a relationship or interconnectivity of the devices.

37. (New) The method of claim 34, wherein at least one notification is generated in response to processing a scan from at least one scanner in the network, further comprising:
receiving a scan complete notification in response to the generation of all the notifications indicating updates resulting from the processing of the scan.

38. (New) The method of claim 37, wherein one task in the first queue is associated with a group of the notifications resulting from the processing of one scan, wherein the task processes the associated group notifications in the second queue in response to receiving the scan complete notification.

39. (New) The method of claim 37, wherein the notifications related to the processing of one scan are processed atomically.

40. (New) The method of claim 37, further comprising:
adding to the second queue the notifications received in response to the processing of one scan; and

adding a task to the first queue in response to the scan complete notification to process the notifications added to the second queue resulting of the processing of the scan for which the scan complete notification was received.

41. The method of claim 40, wherein the tasks in the first queue are executed sequentially.

42. The method of claim 40, wherein the notifications in the first queue are processed on a First-In-First-Out (FIFO) basis or on a basis of priority.

43. The method of claim 34, wherein at least one task queued in the first queue indicates an operator administrator request to modify a device in the network.

44. (New) A computer readable medium having a program executed by a system receiving information on host and storage devices in a network, wherein the program is executed to perform operations comprising:

providing a representation of a topology of the host and storage devices in the network;
providing a first queue including at least one task;
providing a second queue having at least one notification for each task in the first queue;
and

executing the tasks in the first queue to process the at least one notification for the tasks to update the representation of the topology of the network.

45. (New) The computer readable medium of claim 44, wherein each notification indicates an update to the topology of the devices in the network.

46. (New) The computer readable medium of claim 45, wherein the updates to the topology indicated by the notifications are a member of a set of updates comprising: adding a new storage or service device to the network; modifying attributes of one device in the network; indicating that a device is missing; a change in a relationship or interconnectivity of the devices.

47. (New) The computer readable medium of claim 44, wherein at least one notification is generated in response to processing a scan from at least one scanner in the network, further comprising:

receiving a scan complete notification in response to the generation of all the notifications indicating updates resulting from the processing of the scan.

48. (New) The computer readable medium of claim 47, wherein one task in the first queue is associated with a group of the notifications resulting from the processing of one scan, wherein the task processes the associated group notifications in the second queue in response to receiving the scan complete notification.

49. (New) The computer readable medium of claim 47, wherein the notifications related to the processing of one scan are processed atomically.

50. (New) The computer readable medium of claim 47, wherein the operations further comprise:

adding to the second queue the notifications received in response to the processing of one scan; and

adding a task to the first queue in response to the scan complete notification to process the notifications added to the second queue resulting of the processing of the scan for which the scan complete notification was received.

51. The computer readable medium of claim 50, wherein the tasks in the first queue are executed sequentially.

52. The computer readable medium of claim 50, wherein the notifications in the first queue are processed on a First-In-First-Out (FIFO) basis or on a basis of priority.

53. The computer readable medium of claim 44, wherein at least one task queued in the first queue indicates an operator administrator request to modify a device in the network.

54. (New) A network, comprising:

storage devices;

host devices connected to the storage devices;

a system including:

a processor;

a representation of a topology of the host and storage devices in the network;

- a first queue including at least one task;
- a second queue having at least one notification for each task in the first queue;
- a computer readable medium including a program executed by the processor to perform for tasks in the first queue executing the task in the first queue to process the at least one notification for the task to update the representation of the topology of the network.

55. (New) A network, comprising:
storage devices;
host devices connected to the storage devices;
at least one agent, wherein each agent is associated with one of the hosts, for monitoring a topology of the network, wherein the agents identify attributes of any of (i) the host with which it is associated, (ii) the interconnect to which that host is coupled, and (iii) storage units to which that host is coupled; and

- a manager service in communication with the agents, comprising:

- a discover module that identifies changes in the SAN based on attributes identified by the agents and generates at least one notification corresponding to each such change;

- a service module in communication with the discover module that receives the notifications from the discover module, wherein the service module performs:

- generating a first queue including at least one task;
 - generating a second queue having at least one notification for each task in the first queue;
 - executing the task in the first queue to process the at least one notification for the task to update a representation of the topology of the network.